CASTLEMAINE NATURALIST

SEPTEMBER 1990 #160

HAIRY-LEAVED BURSARIA

A plant specimen given for identification has been identified as the Hairy-leaved Bursaria (Bursaria lasiophylla). This is only the second specimen that I have seen in Castlemaine. It differs from its close relative, Sweet Bursaria, (Bursaria spinosa) in that the backs of the leaves have a dense mat of fine hairs. The specimen examined was in flower, so this may indicate another difference between the two species, as Sweet Bursaria usually flowers in early summer - it is sometimes called the Tasmanian Christmas Bush.

The specimen was from the Castlemaine - Maldon Railway, near the outskirts of Castlemaine. It is an additional area record for the Club's plant list.

The Latin name helps describe the plant
bursaria - with a purse. The seed cases are shaped like a shepherd's purse.
lasiophylla - having hairy leaves.

PINK CLIFFS, HEATHCOTE.

The Heathcote district is of considerable geological interest. Rocks of the following ages can be found.

CAMBRIAN VOLCANIC ROCKS. Age: 550 million years b.p. - these underwater volcanic rocks were laid down before the land was colonised by plants or animals. The rock was originally molten, or volcanic ash.

The Cambrian rocks form a N-S range from Mt William near Lancefield to Colbinabbin and Rochester. A mixture of volcanic rocks occur, of various compositions and textures. Diabase is typical - it has abundant dark coloured minerals (containing iron and magnesium), and less quartz than granite and more quartz than basalt. The rocks have been extensively altered (metamorphosed). The original minerals have been altered, and in some cases have been completely replaced by minerals of different composition. Collectively the rocks are often called 'greenstone'.

Magnesite (magnesium carbonate) is a white mineral

present in the decomposed diabase. It has been mined to make refractory ceramics.

ORDOVICIAN MARINE SEDIMENTS. Age: 450 million years b.p.- laid down when primitive fish were inhabiting the ocean. The rocks formed from sand and clay washed by rivers into the sea. The rocks are about the same age as those at Castlemaine. As at Castlemaine, gold was present and the area has been mined.

SILURIAN/DEVONIAN SEDIMENTS Age: 400 million years b.p. -laid down when woody plants were beginning to colonise the land and fishes were dominant in the seas. The rocks are similar to Castlemaine rocks, but are much younger. They are found to the east of Heathcote.

DEVONIAN GRANITES. Age: 350 million years b.p. - formed when horsetails and clubmosses had colonised the land (the next geological age was the Carboniferous when much coal was laid down). Granite formed when molten rock cooled slowly, while still well below the land surface. The granite has been exposed by erosion of the original upper layer. The Heathcote rock is a very fine-grained granite (called micro-granite). Perhaps the granite cooled more rapidly here.

As the granite cooled from molten rock it cracked into large blocks. Seepage along the cracks has produced separate blocks, which gradually become rounded (called granite tors)

Granite contains three kinds of crystals. They are quartz (which does not weather - it remains as as sand), felspar (which weathers to a clay called kaolin), and iron/magnesium minerals, typically black mica. If there is little iron present, a white clay forms. If more iron is present, a pink clay forms.

At Pink Cliffs, we can see granite tors, and various degrees of weathering, and pink kaolin.

METAMORPHIC ZONE. The granite has intruded into the Cambrian Greenstones. Unlike the Harcourt district, where up to a kilometre of rock has been baked hard, only a thin (about a metre or less) metamorphic zone is present at Pink Cliffs.

THE PERMIAN ROCKS AT EPPALOCK. Age: 250 million years b.p. - formed at the time when amphibians were dominant, and when reptiles were beginning to appear. Conifers were now present on land. The Permian age was one of glaciation, and much evidence of glaciation can be found on the eastern side of Lake Eppalock e.g. ice scratches on rocks, erratics (foreign rocks carried and dumped by glaciers). Tillite (a kind of glacier-deposited conglomerate) can be seen along the McIvor Highway.

The Mia Mia - Heathcote road crosses Permian deposits about 5-10 km from Mia Mia.

TERTIARY GRAVELS Age: 25 million years b.p. - mammals, including primates, were present. These are old river gravels, similar to those at Castlemaine.

Before mining took place, the granite was covered with soil. Erosion, as a result of mining, has denuded the granite and much of the weathered granite has also been eroded away. Sometimes tors have protected the clay underneath from erosion, to leave the stones standing on 'stalks'.

RECENT SEDIMENTS. Age: Up to 1 or 2 million years b.p. The sediments are to be found along creek valleys.

Pink Cliffs

Look for
- granite - what sized crystals?
- sand (from weathering of granite)
- Kaolin (from weathering of granite - what colour?),
- granite tors (boulders - a result of erosion)
- Cambrian greenstones (metamorphosed volcanic rock)
- Magnesite (white magnesium carbonate)
- Tertiary gravels
- Iron oxide
- Unconformities (junction of rocks of differing ages)

Mt Ida & Knowlsley Faults.

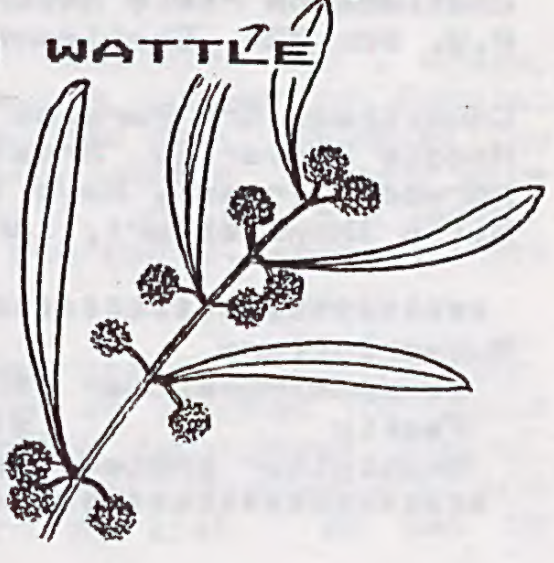
There has been large scale earth movements at Heathcote, with vertical movement of many kilometres. The Mt Ida fault is just to the east of the highway, and the Knowsley fault west (at the edge of the granite).

Mt Ida

Mt Ida is 450 m above sea level (cf. Mt Alexander 741 m). Rocks are of Devonian age. Further east, at Costerfield, the rocks are older i.e. of Silurian age.

WHIPSTICK CINNAMON WATTLE

The Whipstick Cinnamon Wattle (or Ausfeld's Wattle) is a conspicuous plant of the Heathcote area. It is an open shrub, usually growing to about 2-3 metres. It's leaves are similar in size to our Rough Wattle, but the the leaves are smooth, and with tiny gland-dots. The branchlets are striped, with sticky ridges.



This attractive wattle grows at Heathcote (and particularly at Pink Cliffs), and in the Bendigo Whipstick.

TARNAGULLA BIRD LIST

BELLS SWAMP
White-faced Heron
Great Egret
Lg Black Corm't#
Lt Pied Cormorant
Lg Pied Cormor't#
Darter#
WoodDuck#
Black Duck
Chest-br Shelduck
B. Swan (nesting)
East Swamp-hen
Galah
Long-bill Corella
Eastern Rosella
Red-rumped Parrot
Masked Lapwing
Kookaburra
Welcome Swallow
Mudlark
Magpie
Red Wattlebird
White-plumed H-e
Magpie
Aust. Raven

N OF BELLS SWAMP
Kookaburra
Sacred Ibis (~40)

TARNAGULLA
Grey fantail
Sparrow

TARNAGULLA FOREST
Little eagle
Common Bronzewing
Blue Wren
Grey Fantail
Golden Whistler
Weebill
Chestnut-rump t-b
Red Wattlebird
Noisy Miner
Brown-headed h-e
Yellow-plume h-e
Yel'w-tufted h-e
Spot'd Pardalote
Striated Pard'te
Magpie

LAANECOORIE
Black Cormorant
White-faced Heron
Black Duck
Musk Duck
Dusky Moorhen
Eastern Swamp Hen
Eastern Rosella
Red-rump Parrot
Noisy Miner
Mudlark
White-wing Chough

MUCKLEFORD
Nankeen Kestrel#

Birds marked # are additional locality records for the Club's Bird List. List by EP, LP, & SB.

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SUPPER ROSTER

Sept: M & M Willis Oct: P Shaw, E Hall

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Castlemaine Field Naturalists Club Inc
P.O. Box 324, Castlemaine 3450

Committee: Ern Perkins (Pres), Chris Norwood (V. Pres), Maggie Oliver (V. Pres), Barbara Maund (Sec), Clodagh Norwood (Treas), Kaye Turner, George Broadway, Rita Mills (Newsletter), Ian Higgins, Robyn Holden.

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Subscriptions

Student/Pensioner	$5	Single	$8
Family	$12	Supporting	$15

Newsletter posted: Subscription plus $5.

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THE PERFECTLY PLANNED HOLIDAY
(Just pack the car and go!)

Ruth Miles

The end of July/beginning of August isn't really the ideal holiday time in Victoria, so we decided to head north to the Warrumbungles this year, followed by a trip down through Nyngan and Broken Hill to Adelaide. The floods put paid to that idea, so we decided to head for South Australia instead, perhaps to the Flinders Ranges, or the Yorke Peninsular, or the Eyre Peninsular, then Adelaide. We loaded up the car, included the small tent and the camp stove "just in case", and headed off, with no definite plans, except that Doug wanted to spend a week in Adelaide doing the round of the antique markets and shops, we both wanted to ride on the Paddle Steamer "Melbourne" in Mildura, and I wanted to visit Overland Corner again, and perhaps see the the Splendid and Variagated Wrens and the Regent Parrots.

We stayed at Swan Hill the first night, after calling in at the bird hide in Kerang on the way, and watching a pair of Swamp Harriers hunting. That night I checked a bird I thought may have been an immature Black Shouldered Kite (we'd seen lots of them) and found that it was a Letter-winged Kite, seen somewhere near Lake Boga.

I'd seen 32 different species I could identify for the day, and felt that was a promising start.

We called at Tyntynder next morning, and spent an hour or two there, before continuing on to Mildura in lovely sunshine. We stopped about 50km out of Mildura for afternoon tea and saw Mallee Ringnecks. Flowers were starting to come out, and there was a mallee in flower attracting honey-eaters, but we didn't stop to investigate what they were.

We stayed for two nights at Mildura in the same park, and same van, as last year. There was another immature Pied Butcherbird there, as well as two adults, and all were quite cheeky. We went for a walk along the river bank and saw a pair of mating Nankeen Kestrels. These were the most common raptor seen on the trip, closely followed by the Black-shouldered Kites.

The trip up the river on the P.S. Melbourne was , again, very interesting. Last year we saw a number of Caspian Terns, but not one this year. We also saw only one whistling kite, whereas last year they were very common. There were lots of Pellicans, gulls and cormorants, and quite a number of Black and Wood Ducks. In all I counted 24 species. one more than last year.

From Mildura we went to Waikerie, via Overland Corner. about 20km from the fruit fly station we stopped for lunch at the side of the road, and I added Red-capped Robins, Chestnut-rumped Thornbills, Yellow-plumed Honeyeaters and Western Gerygone plus some others to my list. We had to

stop at the station to check that we were bringing no friut or vegetables into the Riverland. I went round to open the boot, and there on the bumper bar was my cup of coffee, now almost dead cold, but still full! Says a lot for the car, the driver and the road! I drank it, by the way. I suspect the chap on duty has a story to tell for quite a while.

At Overland Corner, although it was overcast for the first time on the trip, we went along the nature part of the walking trail down onto the flats along the billabong. I added Yellow Rosellas, Black-faced Miners (we'd seen plenty of Noisy Miners), Variegated (Black-backed) Wrens, White-fronted Chats, and Regent Parrots, about 30 of them in the tree behind the old Nation Trust pub, to my growing list. We saw another 19 species here, though we were only here for just over an hour. I'd heard wrens down on the flat where I'd seen the Splendid wrens last time, but didn't see them.

The next day we stopped at Morgan for lunch. While I waited for Doug I watched a flock of about 20 Red-rumped Parrots feeding on the lawn close by. What lovely birds they are! Later, while we were having lunch a very vocal family of Apostle Birds joined us. Both the still and the video camera was in the car, of course.

We stayed at Clare for the next two nights in a three roomed cabin on a farm. There was NO T.V. and no phone - no laundry either, but they let me do my bit of washing in their machine and I dried it on clothes horses in front of the pot bellied stove in the lounge area. By the time we got to Clare the weather had become cool and very windy, so we saw very few birds on our walk around the farm, although we were told it is a good area for birds. We spent the next day in Mintaro and Burra doing the historical bit.

From Clare we drove up through Horrocks Pass to Port Augusta and then down to Whyalla for the night. On the way we stopped at our favourite spot in Melrose, at the foot of Mt Remarkable, though Doug's favourite antique shop has changed hands and is now more bric-a-brac. However the spot on the creek a couple of kilometers out of Melrose was still unspoilt, with the contorted old Redgums, some of them quite large, with hollows and bumps everywhere. We saw another Variegated Wren here, and a huge flock of Little Correllas. From Port Augusta to Whyalla we were driving mainly through bluebush and mulga, or mallee.

The next morning we went back down the road to a conservation park that we had passed the afternoon before, and spent over an hour there near a dam. We didn't go right in to the walking track, but the place where we stopped was well worth it as there were dozens of Spiney-cheeked Honeyeaters and White-browed Babblers there, as well as as well as a number of other species, including a family of White-fronted Chats which had come down to drink and bathe - although Dad just looked on. On the way out we saw a Grey Butcherbird.

To be continued

NOTES FOR AUGUST

AUGUST MEETING EXHIBITS included a European Wasp from McKenzies Hill, a Preying Mantis case, and an unidentified insect case.

COOTAMUNDRA WATTLE GALLS. A sample of Cootamundra Wattle had galls replacing flower buds, with some of the flowers opening from the galls.

Reference to "Pests, Diseases & ailments of Australian Plants" by Jones & Elliot suggests that the galls may be made by tiny wasps, which often form galls in eucalypt and acacia blossom. If so, each gall would probably contain several of the larvae.

RED-CAPPED ROBIN has been seen at Muckleford, near Tunnel Track. This is a new Muckleford bird record for the Club's list. (G. Broadway)

SPOTTED QUAIL-THRUSH has been seen in the bush just south-east of Castlemaine. (G Broadway)

GREY CURRAWONGS A pair are nest building in Kaweka Wildflower reserve. The building pace was described as leisurely. (F Blake)

BLACK-SHOULDERED KITE has been seen near the railway station. Visits of this species to the built-up areas are not very common. (K Turner)

BLACK-SHOULDERED KITES were reported to be very common through N.S.W. Further north they are replaced by Nankeen Kestrels. At Caloundra, Brahminy Kites are to be seen. (B Perry)

GREY EVERLASTINGS in Kaweka have been attacked by scales, and about two thirds have died. (F. Blake)

TALL GREENHOODS have been seen in flower in the local bush this season (E. Perkins)

SPOTTED PARDALOTES were observed in Andrew St; the male getting bark from the woodshed, supervised by a pernicky female. Another pair was observed in Campbell st, investigating holes in brickwork, the wall being covered with Ivy and Wisteria.

BLAKELY'S RED GUM has been noted by a member, at the Toolleen turnoff at Axedale.

CASTLEMAINE F.N.C. PROGRAM

Fri 14 Sept. WALKING IN THE WILDERNESS - SW TASMANIA with Pat Bingham. High School at 8.00 pm.

Sat 15 Sept. PINK CLIFFS (HEATHCOTE) and MT IDA. Leave from 27 Doveton St at 10.00 am sharp. Pink Cliffs is signposted from the Highway in Heathcote. Take lunch. Return via Eppalock spillway.

Sun 16 Sept. FLAX-LEAF BROOM PULL from the Botanic Gardens, Froomes Road. 10.00 a.m. Aim is to clear any regrowth from previous pulls.

Mon 17 Sept. DARGILE FOREST. C.F.N.C. is leading the Bird Observers Club weekday excursion. Leave 27 Doveton St at 9.00 sharp, or meet Dargile Forest at 10.30. [Turn right into the highway at Heathcote, then left into Chauncery St for 5 km, then left along Plantation Road for 4 km, then left to the picnic ground.]

Sat 22 Sept. KALIMNA WILDFLOWER WALK, conducted by R. Mills. Donation $2 ($5 family), proceeds towards Schools' Chaplaincy Fund. Outside High School at 2 pm.

Sat-Sun 22-23 Sept. ANGAIR WILFLOWER SHOW. Anglesea.

Fri 12 Oct. TREKKING IN THE HIMALAYAS. Jim Nichols and Lob Sang D Lama. High School at 8.00 p.m.

Sat 13 Oct. BLACK HILL, KYNETON. Leave SEC at 1.30 p.m.

Oct 26-28 GRAMPIANS. WVFNCA campout at Churches of Christ Centre, Halls Gap. Conducted by Stawell F.N.C.

Sat 3 Nov. KALIMNA WALKING TRACK. 9.30 am. (Cast. Festival)

Sat 3 Nov. MUCKLEFORD TOUR. 1.30 pm. (Cast. Festival)

Wed 7 Nov. KAWEKA WALK. 6.30 pm with Kaweka Committee.

Fri 9 Nov. THE PREHISTORY OF DISCOVERY BAY (S.W. Vic). Speaker is Michael Godfrey. 8 p.m. at High School.

Sat 10 Nov. MUCKLEFORD TOUR. 1.30 pm (Cast. Festival)

Sun 11 Nov. KAWEKA WALK. 3.30 pm with Kaweka Committee.

Fri 14 Dec. MEMBERS & VISITORS NIGHT. High School at 8.

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Meetings on the second Friday of each month at Castlemaine High School at 8.00 p.m. Business meetings on the fourth Thursday at 38 Campbell St at 7.30 p.m. All members invited. Visitors are invited to attend the Club's sessions.